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ABSTRACT

Many new educational alternatives are being introduced and new methods of assessing their validity have become necessary. One of these new methods, Comprehensive Achievement Monitoring (CAM), designed to monitor the effects of educational innovation, may also be used to stimulate change in the classroom. Traditional classroom testing frequently does not detect possible incongruencies between the teacher's expectations and the students' performance. CAM methodology, however, provides for gathering information about both pre- and post-instruction achievement together with systematic monitoring during the course, all directly related to course objectives. The teacher is offered several types of information which can be used to identify discrepancies between expected achievement and actual performance and thus provide a motivation to change. Specific definition of expectations, both implicit and explicit, and specific information about performance, as provided by CAM, are essential. Without them the influence on the teacher to change will be slight. (DG)

Stimulating Change in Instructional Systems Through New Evaluation Techniques[1,2]

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Educational innovation has been the focus of many discussions in our profession. The need to improve many of our antiquated practices has motivated the development of a variety of promising new educational alternatives. The validity of the new alternatives is constantly being questioned both constructively, so that the quality of the new practices will be higher than that of the practices being replaced, and destructively, so that the new alternatives may not have any adequate trial in the public domain. The necessity of new methods of evaluation to answer the questions of both groups must be developed.

Comprehensive Achievement Monitoring (CAM) is a successful model of evaluation which offers the school interested in educational innovation an opportunity to far better understand the affects of changes in curriculum and instruction on the growth of students' achievement on specific behavioral objectives. The detail and comprehensiveness of the information gathered by CAM justifies the costs necessary in specifying the curriculum for the new method of evaluation and processing the test results.

This paper focuses on the benefits derived from systematic evaluation like CAM which warrents its use as the first change introduced into a school. Rather than using CAM as only a monitor of the effects of other educational innovations, it can stimulate change. Therefore, evaluation should be supported in a traditional environment as well as a new one.

What is the process by which CAM is able to promote change? The process consists of several necessary phases. Basically, if a teacher specifically defines his expectations for his students and then receives information about their success at meeting these expect-

ations, any lack of congruence between the teacher's expectations and students' performance may motivate change by the teacher. Both the specificity of the definition of the expectations and the specificity of the information about student performance are necessary components of the process. Without either the influence on the teacher to change will be slight.

The teacher's expectations for their students must include the specification of the behavioral objectives for the course and the performance questions which will be used to measure the student's achievement of the objectives. The combination of the objectives and the questions defines what the teacher expects of the students, and therefore also specifies what topics the teaching should cover. But wait! Teachers, as well as all educators, also have implicit expectations for anything which they teach. These expectations are accepted as basic to the results of good teaching.

1. Students entering the course, in general, have little or no learning of the type defined by the behavioral objectives of the course because, if they were familiar with the objectives, the teacher would consider it wasteful to teach them.

2. No incidential learning, from other courses that the student is concurrently enrolled in, the outside environment, or other objectives within the same course, occurs which teach the student all he must know about objectives because if incidential learning were to occur, the teacher should not waste time teaching the objectives already learned.

3. Learning occurs during the teaching of the objectives and that teaching stops when thestudents in the course have attained a satisfactory level of achievement because teaching is expected to

yield learning and should end when learning is adequate.

4. What the student learns is retained, i.e., not forgotten, because if forgetting takes place the teacher should review material.

The expectations of teachers, both the implicit and the explicit ones, must be matched with an evaluation design which will point out to the teacher when his expectations are not met at a time when he can still do something to correct incongruencies. Traditional classroom testing, where the teacher makes up a test to evaluate only the material which is being taught or just has been taught, is not suitable as a source of information to check for most of the possible sources of incongruencies. Traditional testing follows instruction and therefore does not usually provide any information about pre-instruction achievement. The teacher usually designs the test while he is teaching and therefore probably emphasizes in the test those areas he emphasized in teaching, thus creating a test which is not balanced, systematically, with questions covering all topics which are important in an area. As for measuring students' retention of the ideas they have learned, traditional classroom testing may use a final test, but it is usually neither a systematic sampling of the year's work nor comparable to the tests given immediately after instruction. With such poor information about student achievement, possible incongruencies between the teacher's expectations and the students' performance are not detected.

CAM offers teachers the information necessary to decide whether their expectations have been met. The pretest information gathered at the beginning of the year is more detailed than any usual testing method. All the information gathered is directly related to the course objectives for the entire course. The systematic bi- or tri-weekly monitoring continues to provide information about

incidential learning for any of the course objectives. The longitudinal nature of the information about pre-instruction achievement allows the teacher to see possible relations of objectives to be taught in the future with material being taught. Immediate post-instruction information is comparable with the information from traditional classroom testing, but has the added advantage of being specifically related to objectives of the course. The systematic evaluation after instruction allows the teacher to check retention.

The CAM methodology offers the teacher several powerful types of information which can be used to identify discrepencies between the expected achievement of students and their actual performance and thus provide a motivation to change.